

CLAIMS

1. A method for controlling the operation of a sensor (11) associated with exhaust-gas purifying means (7) of an internal combustion engine (2), characterized in that the output signal (S1) of the sensor is compared with a reference value (C), and the sensor (11) is acted on in order to decrease the difference (ϵ) between the output signal (S1) and the reference value (C).

2. A method according to claim 1, characterized in that the operating temperature of the sensor (11) is modified.

3. A method according to claim 2, characterized in that the supply voltage of the sensor (11) is changed from a nominal supply voltage (T_{nom}).

4. A method according to any one of the preceding claims, characterized in that the sensor (11) is acted on as a function the difference (ϵ) between the output signal (S1) of the sensor (11) and a reference value (C) determined during a phase of regeneration of the purifying means (7).

5. A method according to any one of the preceding claims, characterized in that the sensor (11) is acted on as a function of the difference (ϵ) between an output signal (S1) of the sensor (11) and a reference value (C) determined during a final stage of a phase of regeneration of the purifying means.

6. A method according to any one of the preceding claims, characterized in that a failure of the sensor (11) is detected as a function of the action applied to the sensor to decrease a difference (ϵ) between the output signal (S1) and the reference value (C).

7. A device for controlling the operation of a sensor associated with exhaust-gas purifying means of an internal combustion engine, characterized in that it comprises measuring means (21) capable of determining a difference (ϵ) between the output signal (S1) of the sensor and a reference value (C) plus means (22, 23) for controlling the supply voltage of the sensor (1) as a

function of the difference (ϵ) between the output signal (S1) of the sensor and the reference value (C).

8. A device according to claim 7, characterized in that the sensor is an oxygen sensor (11) of the "all-or-nothing" type disposed downstream from a catalytic converter (7).

9. A device according to any one of claims 7 or 8, characterized in that it comprises a detection module (24) capable of detecting the stages of a phase of regeneration of the exhaust-gas purifying means (7) on the basis of a signal delivered by the sensor (11) plus a measuring module (21) capable of determining the difference between the output signal (S1) of the sensor (11) and a reference value (C) during the final stage of a regeneration phase.